

POPE of Major Schemes Summary Report

Scheme Title	A27 Southerham to Beddingham Improvement
Opening Date	August 2008
POPE Stage	Five Years After

Scheme Description

The A27 Southerham to Beddingham Improvement was a Highways Agency major scheme to improve the A27 near Lewes in East Sussex and removed the existing half barrier level crossing at Beddingham. The scheme opened in August 2008 and included the following key features:

- Grade separation involving the construction of a new bridge carrying the A27 trunk road over the Lewes to Eastbourne railway line at Beddingham, replacing the existing level crossing;
- Widening of the westbound carriageway to two lanes along its 1.4 mile length between Southerham and Beddingham roundabouts;
- Widening of the entries with segregated left hand turns at Southerham and Beddingham roundabouts; and
- Extension of the existing combined footpath and cycleway running along the northern edge of the A27, to just east of Beddingham roundabout.

Objectives (as at entry into major schemes programme)	Has the scheme objective been achieved?
To make the crossing of the A27 over the railway line safer	✓
To reduce delays for road users	✓
To cater more effectively for traffic using the route	✓
To provide better facilities for cyclists and pedestrians	✓

Summary of Scheme Impacts

Traffic

- Traffic flows on the A27 within the scheme have increased on weekdays on average by 4,800 to 36,300 vehicles per day (vpd) (15%) five years after opening compared with the before period. Likewise, the sections of A27 road east and west of the scheme have increased in contrast to the general reductions seen on the roads regionally during this time period.
- Analysis of traffic flows on alternative roads in the wider area has shown that additional traffic on the A27 corridor has reassigned from the wider road network.
- Compared with the forecast, traffic on this section of the A27 has 2,000 vpd less than expected but this is only a 6% difference from forecast and is largely in line with the national and regional trends of the reduction in traffic in recent years.

- On the scheme's section, journey time savings were observed in the peak and inter-peak periods in both directions. The greatest savings are 2.5 minutes for PM eastbound traffic and 1.2 minutes in the AM westbound traffic.
- Reliability for road users has improved through the provision of the bridge over the railway line and removal of the level crossing. This is an improvement on the situation with the crossing that existed before, with half-barriers and up to 8 closures per hour. Had the A27 bridge over the railway not been built, reliability in future years would have become substantially worse for road users with the introduction of full barriers at the level crossing, resulting in delays of up to 24 minutes per hour.

Safety

- Although traffic levels have increased on the A27, the collision rate for vehicles has reduced by 38% and this is statistically significant.
- Collision numbers have reduced by 3.4 per year once national trends are taken account of, but this is not statistically significant, due to the extra traffic.
- The greatest change has occurred with the prevention of collisions at the level crossing and improvement to the road standard north of the new railway bridge.
- Saving in collisions on the scheme is half that forecast.
- Removal of the level crossing has a large benefit for rail safety due to the important reduction in the risk of a road/rail collision at this point.

Environment

- Traffic flows are slightly lower than predicted (12%), although not sufficient to influence the expected score for Noise & Vibration and Air Quality.
- A slightly restricted growth rate was noted within the scheme. This is likely due to plant spacing of up to two metres for planting plots combined with chalk soils with limited topsoil.
- Monitoring of ecological features has ceased after the one year after point (OYA), hence evaluation within the biodiversity section is limited, although installed features appear to be developing as required.
- Subsequent to this scheme, an extension has been constructed provide a connection between the extended shared-use footpath/cycleway just east of Beddingham, to the Regional Cycle Route 90, linking towns and villages along the A27 corridor. It was observed during the site visit that this extension appears well-used with five cyclists noted within one hour.

Economy

All monetary figures in 2002 Prices and values			Forecast	Outturn re-forecast
Indirect Tax impact as increasing the cost	Present Value Benefits	Journey Times	£359.1m	£286.0m
		Vehicle Operating Costs (VOC)	£60.8m	£141.3m
		Safety	£66.0m	-
		Total	£485.9m	£427.3m
	Present Value Costs (includes indirect tax)	£51.9m	£81.3m	
Benefit Cost Ratio (BCR)			9.4	5.3
Indirect Tax impact as reducing the benefit	Present Value Benefits (including indirect tax)	Total	£463.9m	£376.2m
	Present Value Costs		£29.9m	£30.2m
	Benefit Cost Ratio (BCR)		15.5	12.5

- The scheme investment cost was £29.1m in 2002 prices, very similar to that forecast.
- The outturn assessment of the scheme's benefits show that it will provide £427.3m in present value benefits in 2002 values over 60 years, only 12% below that expected.
- The outturn BCR according to current guidance is 12.5 which represents over £12 for every £1 spent.
- Monetary benefits from safety improvements over a wide area cannot be confidently attributed to this scheme, which is worse than expected. This is due to higher than forecast level of collision reduction observed nationally; this would have reduced collisions in the area even if the scheme had not been built.
- Rail safety benefits are not included in these monetised benefits.
- Newhaven Port is linked to the strategic road network by the A26 which meets the A27 at the Beddingham roundabout so this scheme's improvements will benefit freight accessing the port.

This document summarises the findings of the Five Years After (OYA) post opening evaluation study completed in December 2014.